

REMARKS

The present invention primarily relates to a guide wire having a distal portion terminating in a guide portion. A reinforcing means (e.g., an elongated dorsal fin-like structure, (FIG. 7(b))) is provided on the distal portion which minimizes axial twisting of the distal portion.

Claims 1-53, 56, and 68 were previously canceled. Claims 54, 55, 57-67, and 69-85 are pending. Applicants have previously amended claim 70 to insert the language “and being perpendicular to” as is shown. The language emphasizes the feature of the present invention in which the distal portion reinforcing member is required to be perpendicular to the “flat major surfaces of the distal portion”. Basis for this language insertion is found in the published application relating to this invention (viz., US 2007/0032744 A1) at paragraph [0059]. No new matter is introduced.

Applicants also previously added claims 78-85. Claim 78 was based upon claim 70 and more clearly defines the relationship between the major flat surfaces of the distal end of the guide wire and the “reinforcing member”. Specifically, claim 78 requires the “reinforcing member” to terminate at a location which is “axially spaced apart from the distal end of the distal portion to define with the distal end of the distal portion the guide portion.” As will be shown this required foreshortening and termination of the reinforcing member at a point which is “axially spaced” from the extreme distal end of the guide wire is nowhere disclosed nor suggested by the primary reference (Osawa et al.) on which all of the present claims are rejected.

The objection to claims 82 and 83 has been obviated by changing their antecedent reference.

Section 112, ¶2 Rejections for the Added Language “and being perpendicular to” in claims 70 and 78

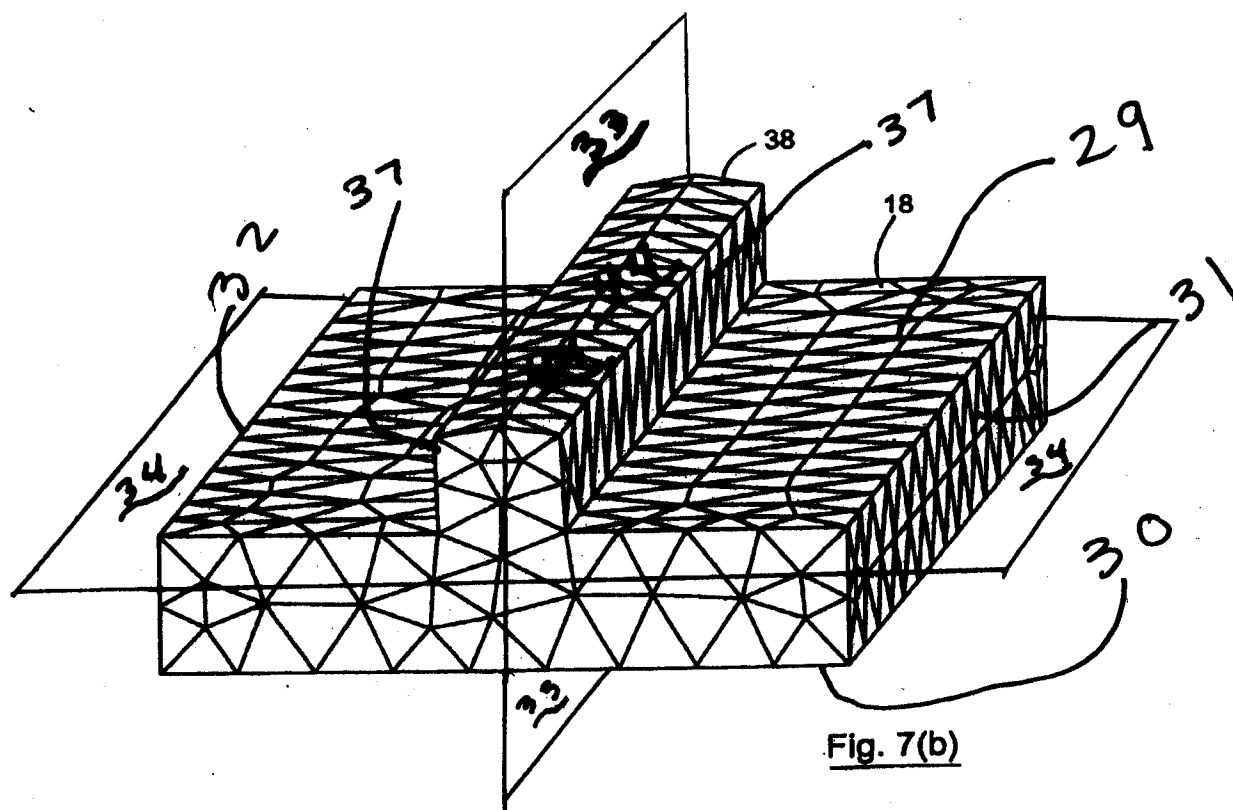
In the Office Action numerous §112, ¶2 rejections are raised regarding various of the claims with the assertion that there is a lack of antecedent basis and thus lack of clarity in claims 70 and 78 (among others) for the language:

“reinforcing member...being perpendicular to one of the flat major surfaces.” (hereafter “the Objected-to Language”)

The Objected-to Language was added to claim 70 and included in then new claim 78 in the 08/05/2010 Rule 116 Amendment that was entered herein with the filing of the a Request for Continued Examination on 2010-09-02. As was indicated in the Rule 116 Amendment, antecedent basis for that language insertion was to be found in the published application a paragraph [0059].

In addition to being disclosed in paragraph [0059], the sufficiency of which the Examiner finds to be lacking, the Objected-to Language finds basis in FIG. 4 which is indicated in paragraph [0046] to be “a transverse cross-sectional end elevational view of the guide wire of FIG.1 on the line IV-IV of FIG. 2,”. FIG. 4 appears just to the left end of FIG. 2 and is slightly obscured by the lead lines.

Further basis for the Objected-to Language is found in detail in FIG. 7B. which is simply “a portion of the guide wire of FIG. 1” included to show finite element analysis (paragraph [0049]). In FIG. 7B the reinforcing member 38 is clearly shown to be perpendicular to major surfaces 29 and 30 (inserted in attached Fig. 7(b) by the undersigned) and coplanar with minor surfaces 31, 32 (also inserted in attached FIG. 7(b) by the undersigned.)



Yet further the Objected-to Language finds basis elsewhere in the specification. Paragraph [0058] provides in part:

“...The distal portion 18 tapers gradually from its proximal end 26 to its distal end 27 with the respective major surfaces 29 and 30 converging towards each other. The major surfaces 29 and 30 define a central major plane 33 located midway between the major surfaces 29 and 30, and the minor surfaces 31 and 32 define a central minor plane 34 midway between the minor surfaces 31 and 32 and perpendicular to the central major plane 33. (emphasis supplied)

Continuing in paragraph [0059]:

“A reinforcing means comprising a reinforcing member 38 extends longitudinally along one of the major surfaces 29 and 30 of the distal portion 18. In this embodiment of the invention the reinforcing member 38 extends along the major surface 29. The reinforcing member 38 coincides

with the central minor plane 34, and extends axially along the major surface 29 from the proximal end 26 and terminates at 40....” (emphasis supplied)

Central major plane 33 and central minor plane 34 are seen in FIGS. 2, 3 and 5. They have also been drawn by the undersigned attorney into modified FIG. 7(b), above.

The syllogism flowing from the above-cited language is as follows:

- 1) The central minor plane 34 lies midway between minor surfaces perpendicular to the major plane;
- 2) The reinforcing member 38 coincides with the central minor plane;
- 3) Therefore the reinforcing member 38 must be perpendicular to the major plane.

It is submitted that there a more than adequate disclosure in the specification and figures to for one skilled in this art to understand the meaning of the Objected-to Language in compliance with 35 U.S.C. §112, ¶ 2.

Reinterpretation of U.S. 7,083,577 to Osawa et al. (“Osawa et al.”).

It was noted starting at page 2 of the prior Office Action (dated 04/08/10) that the Examiner reinterpreted the Osawa et al. primary reference. As is stated at the bottom of page 2 of the prior Office Action “the middle stepped section of Fig. 8-A [of Osawa et al.] is now interpreted as the “reinforcing member”, while the section of lower height to its left in Fig. 8-A is now interpreted as the “guide portion”,.... The Examiner further notes starting at the top of page 3 of the prior Office Action that the “middle section clearly extends to and terminates at a point axially spaced apart from the most distal end of the distal portion....”

At FIG. 8-B of Osawa et al., the sectioned view shows (using the Examiner’s analysis) three stepped segments which comprise the alleged reinforcing member, the most distal of which clearly is coterminous with the extreme distal end of the structure designated “major flat surface” by the Examiner in 8-C. There is no basis in Ozawa et al. for conveniently selecting only the middle segment of 3 segments (to the exclusion of the other 2 segments) of the alleged reinforcing member of Ozawa et al. to be “the reinforcing member” and concluding that part of the partial structure meets the claim language “axially spaced apart from the distal end of the distal portion...” in claims 70 and 78. For the Examiner’s analysis to work Applicant’s claims

would have to require the reinforcing member to be only partially axially spaced from the distal end of the distal portion. No such requirement is present.

This reinterpretation of Osawa et al. has a second drawback viz., it now requires the “reinforcing member” to be in the same plane as the “flat major surfaces of the distal portion of the guide wire”. Bending the guidewire in a direction perpendicular to the central major lpane would certainly be feasible. Thus, the primary advantage of the reinforcing member stated in claims 70 and 78 i.e. “minimizing axial twisting of the distal portion” has been eliminated and is not permitted by the reinterpretation of the Osawa et al. structure. Thus, while the Examiner’s reinterpretation of Osawa et al. is certainly creative, it does not permit a structure having either the functional advantage or the specific structure provided by the present invention.

To emphasize the above Applicants have added, in claim 70, language indicating that the “reinforcing member” is “perpendicular to one of the flat major surfaces of the distal portion of the guide wire.” That inserted language emphasizes and unambiguously distinguishes claim 70 from anything disclosed or suggested by Osawa et al. whether under its first interpretation or under its reinterpretation in the prior Office Action.

The same amended language is used in claim 78. As is noted above claim 78 has other limitations which further distinguishes it from Osawa et al., as reinterpreted, and additionally requires the reinforcing member to be “foreshortened” i.e. to terminate proximal to the extreme distal end of the guide wire.

Art rejections

Independent claims 70 and 78 are rejected under 201(e) over Osawa et al. The discussion above shows how no anticipation of claims 70 and 78 is shown by Osawa et al.

Dependent claims 54, 55, 57-67 and 69-77 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Osawa et al. That rejection is respectfully traversed.

All the rejected claims depend directly or indirectly upon independent claims 70 and 78. As is also noted above, Osawa et al. as reinterpreted in the Office Action which requires “a pair of opposite major flat surfaces” and the “reinforcing member” to be co-planer or at least to lie in parallel planes. The requirement of the reinforcing member and the flat surfaces defining the distal portion of the guide wire to being parallel planes precludes the presence of a structure

which provides reinforcement to “minimiz[e] axial twisting of the distal portion [of the guide wire].” Cf., claim 70. This is, perhaps, best illustrated at Figs. 7(b) and 8(b) in which it is shown how guide member 38 prevents axial twisting of the distal end of the guide wire. Perhaps more to the point, Figs. 7(a) and 8(a) (which are not structures of claims 70-85) are the structural equivalents of the Examiner’s reinterpretation of Osawa et al. Thus, it is submitted that claim 70 and all claims depending therefrom are not and cannot be anticipated under 35 U.S.C. 102 (e) by Osawa et al.

It follows that the various detailed rejections of the dependent claims should be withdrawn.

Amended Claim 78, Claims 79-85

Claims 78-85 track much of the language of rejected claim 70 particularly including the requirement of the “reinforcing member” being perpendicular to one of the flat major surfaces of the distal portion of the guide wire....” That structure is nowhere disclosed nor suggested by Osawa et al. More to the point, Osawa et al., as reinterpreted to require the elements defining the distal portion of the guide wire and the reinforcing member to be at least co-planar, does not and cannot disclose or suggest claims 78-85.

To more clearly distinguish claim 78 from Osawa et al., the language “the reinforcing member being of a rectangular transverse cross-section and defining opposite longitudinally extending sides which extend to a longitudinally extending edge (44), the opposite longitudinally extending sides being parallel to each other and converging toward the reinforcing member and converging toward the reinforcing member distal end” has been added thereto. Basis for this language is found *inter alia* in claims 59 and 60, paragraph [0061], and FIGS. 5 and 7(b). No new matter has been introduced. Osawa et al. in no way anticipates or suggests claim 78, as amended (without prejudice to pursuit of pre-amendment claim 78 in further prosecution).

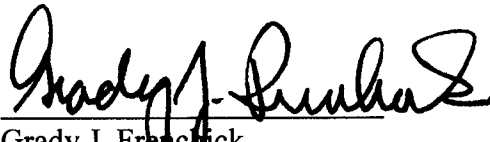
Conclusion

Based upon the above claim amendments and remarks, it is clear that Osawa et al. does not “anticipate” any of the presently pending claims. There being no other rejections, it is respectfully requested that all pending claims be passed to issue.

The Examiner is invited to telephone the undersigned attorney if a phone conference can materially advance prosecution of these claims.

Respectfully submitted,

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